

Gefran PK Series Rodless Linear Potentiometers

GEFRAN
BEYOND TECHNOLOGY

Features

- Excellent reliability under all conditions
- Mechanical linkage joint (M5 thread) takes up play
- Designed for easy installation thanks to an absence of electrical signal variation in output
- Mounting grooves provide a good alternative to fastening with brackets
- Typical applications include plastic injection presses, vertical presses, and

many other types of processing machinery

- Grade of protection: IP40
- All potentiometers are individually tested at the manufacturer, and an individualized Linearity Error Chart is included with each unit

Gefran PK Series Linear Potentiometers Selection Chart

Part Number	Price	Useful Electrical Stroke (CEU) mm [in]	Theoretical Electrical Stroke (CET) mm [in]	Resistance	Mechanical Stroke (CM) mm [in]	Case Length (A) mm [in]
PK-M-0400-L	\$253.00	400 [15.75]	406 [15.98]	10K Ω	416 [16.38]	556 [21.89]
PK-M-0500-L	\$283.00	500 [19.69]	509 [20.04]	10K Ω	519 [20.43]	659 [25.94]
PK-M-0600-L	\$298.00	600 [23.62]	611 [24.06]	10K Ω	621 [24.45]	761 [29.96]
PK-M-0700-L	\$312.00	700 [27.56]	713 [28.07]	10K Ω	723 [28.46]	863 [33.98]
PK-M-0800-L	\$342.00	800 [31.50]	815 [32.09]	10K Ω	825 [32.48]	965 [37.99]
PK-M-0900-L	\$355.00	900 [35.43]	915 [36.02]	10K Ω	925 [36.42]	1065 [41.93]
PK-M-1000-L	\$450.00	1000 [39.37]	1017 [40.04]	10K Ω	1027 [40.43]	1167 [45.94]

Gefran PK Series Linear Potentiometers Specifications

Independent Linearity (Within CEU)	$\pm 0.05\%$
Resolution	Infinite
Repeatability	0.01 mm [0.0004 in]
Electrical Connections	4 pole connector DIN43650
Displacement Speed	Standard ≤ 10 m/s [32.81 ft/s]
Protection Level	IP40
Life	-
Displacement Force	≤ 1.2 N
Vibrations	5-2000 Hz: Amax=0.75 mm [0.03 in], amax=20g
Shock	50g, 11ms
Acceleration	200 m/s ² max (20g)
Tolerance on Resistance	$\pm 20\%$
Recommended Cursor Current	< 0.1 μ A
Maximum Cursor Current	10mA
Maximum Applicable Voltage	60V
Electrical Isolation	$> 100M\Omega$ at 500V=, 1bar, 2s
Dielectric Strength	$< 100\mu$ A at 500V-, 50Hz, 2s, 1bar
Dissipation at 40°C [104°F] (0W at 120°C [248°F])	3W
Thermal Coefficient of Resistance	-200 to +200 ppm/°C typical
Actual Temperature Coefficient of Output Voltage	≤ 5 ppm/°C typical
Working Temperature	-30 to +100°C [-22 to +212°F]
Storage Temperature	-50 to +120°C [-58 to 248°F]
Case Material	Anodized aluminum, Nylon 66
Shaft Material	Stainless steel AISI 303
Mounting	Brackets with variable longitudinal axis with M6 screw ISO4017-DIN933

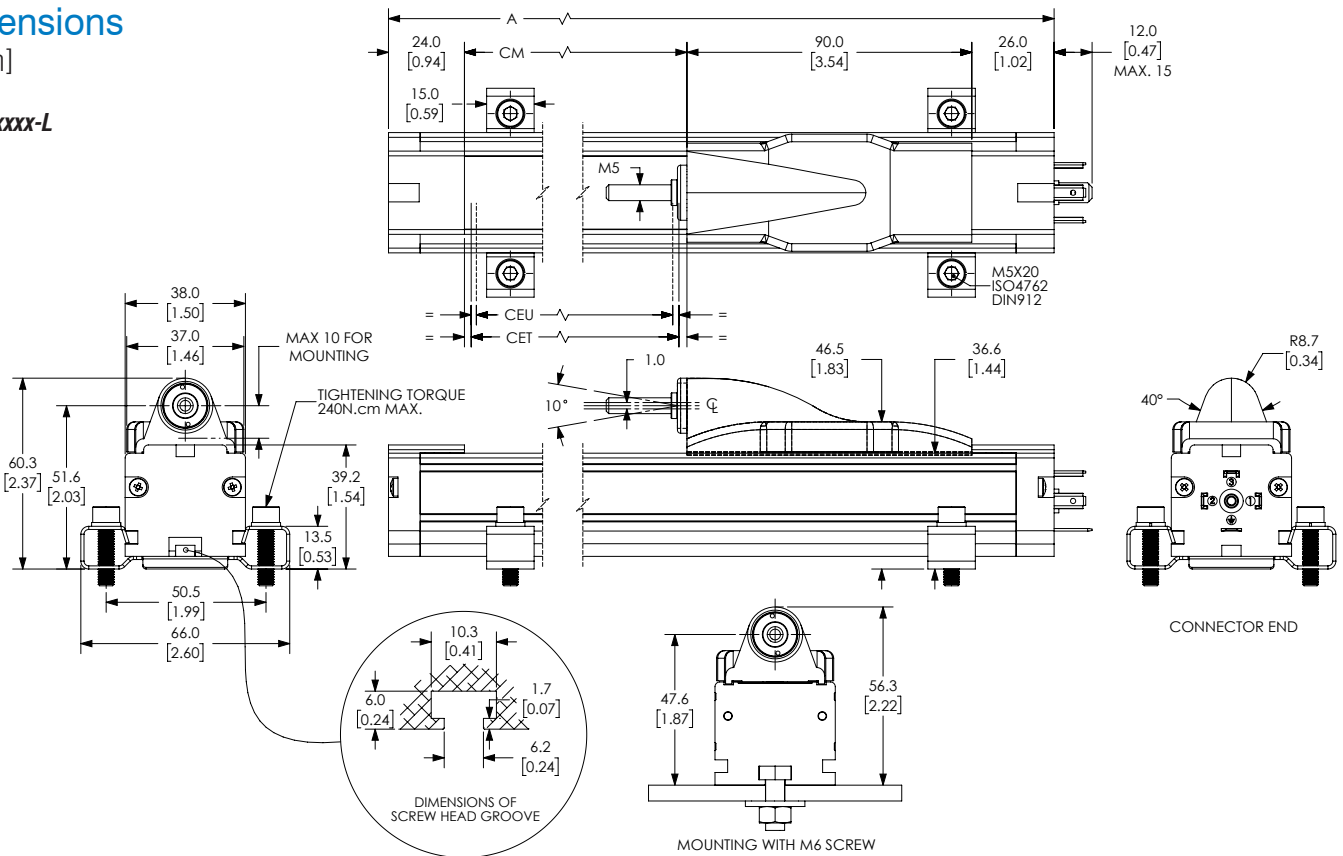
Gefran PK Series Rodless Linear Potentiometers



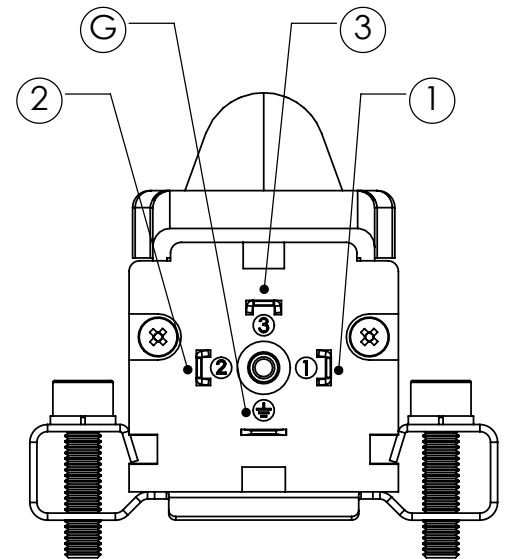
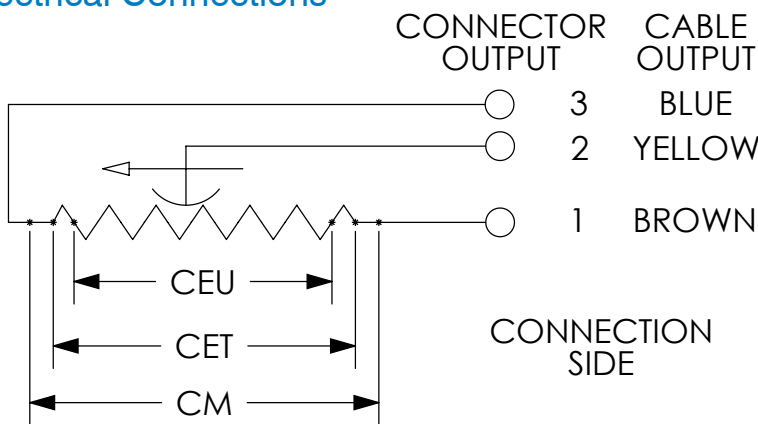
Dimensions

mm [in]

PK-M-xxxx-L



Electrical Connections



When choosing a transducer, it is important to remember that three different strokes exist:

- **Mechanical Stroke (CM):** The actual shift that the transducer's cursor (wiper) is able to make.
- **Useful Electrical Stroke (CEU):** The part of the mechanical stroke in which transducer linearity is guaranteed.
- **Theoretical Electrical Stroke (CET):** Stroke expressed in mm or angular degrees between the electrical zero ($V_{out}=0$) and the electrical limit switch ($V_{out}=V_s$), which physically is equal to the distance between the silver pitches at the ends of the resistive track.

Therefore, when designing an application, you should choose a transducer with a useful electrical stroke that is equal to or greater than the maximum displacement carried out by the moving part.

Gefran Linear Potentiometer Accessories

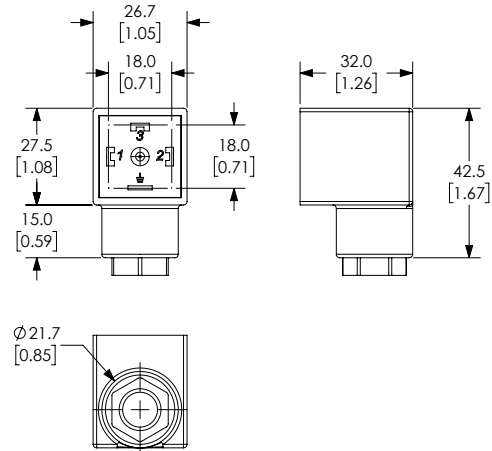


Connectors For Gefran Linear Potentiometers				
Part Number	Price	Description	Cable Entry	Number of Poles
CON006-1KJ	\$7.50	Gefran field wireable connector, 18mm DIN 43650 Form A, screw terminals, for use with Gefran LT and PK series potentiometers	90° cable entry	4
CON008-1KJ	\$7.50	Gefran field wireable connector, 9.4mm DIN 43650 Form C, 90-degree cable entry, 4-pole. For use with Gefran PC series potentiometers.	90° cable entry	4

CON006-1KJ



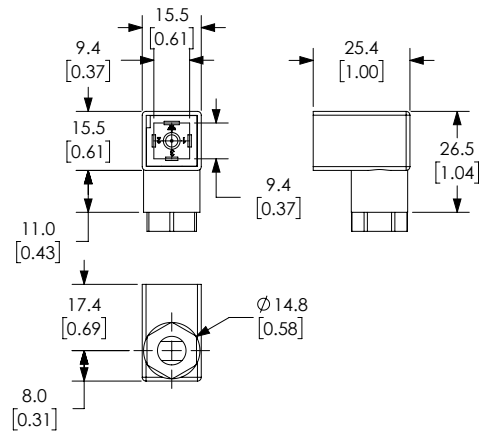
Dimensions
mm [in]



CON008-1KJ



Dimensions
mm [in]



Mounting Brackets and Accessories For Gefran Linear Potentiometers		
Part Number	Price	Description
PKIT009-1KJ	\$11.00	Gefran mounting brackets, for use with Gefran LT Series potentiometers
PKIT015-1KJ	\$20.00	Gefran rod eye joint accessory, for use with Gefran LT Series potentiometers
PKIT059-1KJ	\$11.00	Gefran mounting brackets, for use with 100 to 900mm Gefran PK Series potentiometers
PKIT061-1KJ	\$14.00	Gefran mounting brackets, for use with 1000 to 2000mm Gefran PK Series potentiometers
STA074-1KJ	\$5.00	Gefran mounting brackets, for use with Gefran PZ12-S Series potentiometers



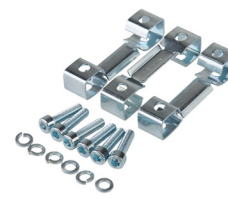
PKIT009-1KJ



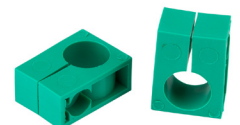
PKIT015-1KJ



PKIT059-1KJ



PKIT061-1KJ



STA074-1KJ